

Mint of the United States at Philadelphia,

MELTING AND REFINING DEPARTMENT,

Philadelphia, 24 Aug. , 1882

Approximate value of Coinage of U. S. in Gold and Silver from the beginning in 1792 to 30th June 1882

	<u>Spec. Grav.</u>	<u>Wt. Cub. Inch.</u>	<u>Measure of \$ one Million</u>
Gold	17.25	4354.99 grains	5924.36 C.I.
Silver	10.30	2602.84 "	158481. "

	<u>Total Issue, value</u>	<u>Measure</u>
Gold	\$ 1300,000,000 =	4,457 C.F.
Silver	335,000,000 =	30,724 "

	<u>Size of the Cube of the preceding capacity.</u>
Gold	16½ ft. on a side, nearly.
Silver	31½ ft. — " — " — " — .

The above calculations are based on One Cubic Inch of Water, weighing 252.458 Grains, at 62° Fahr. and 30 inches Barom.

J. C. Booth

M. & R.

1 C.T. water @ 62° Fahr. & 30 in. Bar: = 252.458 · log. = 2.4021892
 sp. gr. of Gold Coin (U.S.) rolled = 19.25. log = 1.2367891
 1 C.T. Gold Coin = 4354.9005 grains. log = 3.6389783

4354.9005 grs. Gold coin contain 4354.9 × .9 = 3919.41 grs Gold pure

grs. water sp. gr. pure gold
 252.458 × 19.2 = 4847.1936 = grs. in 1 C.T. pure gold

or, l. 252.458 = 2.4021892 } = 3.6854904 = log. 4847.1936
 l. 19.2 = 1.2833012 }

(100) One Dollar gold = 25.8 \$1000 = 25800. $\frac{25800}{4354.9} = 5.92436$
 $\frac{25800}{4354.9} = 5.92436$
 $\frac{25800}{4354.9} = 5.92436$

\$1,000,000 Gold Coin = 5924.36 C.T. =

l. $\frac{5924.36}{1728} = \frac{3.7726415}{-3.2375437} = 0.5350978 = \text{l. } 3.42845 \text{ C.F.}$

\$1300,000,000 Gold coin = $\frac{1300 \times 5924.36}{1728} = 4457. \text{ C.F. } = (16.4569)^3$

sp. gr. Silver coin = 10.3 252.458 × 10.3 = 2602.84 grs in C.T. Silver coin.

Wt. of one Doll. = 412.5 grs. of \$1000 = 412500 grs. l. = 5.6154240
 l. 2602.84 = 3.4154475

l. of 158.481 C.T. = 2.1999765

\$1,000,000 Silver coin = 158481 C.T. l. = $\frac{5.1999765}{2.2375437} = \text{l. } 91.7134 \text{ C.F.}$
 1728 C.T. = 1 C.F.

\$335 Millions. l. = $\frac{2.5250448}{4.4874776} = \text{l. } 30724 \text{ C.F.} = (31.3203)^3$

\$1.00 = 412.5 grs

$\frac{412.5}{371.25} = 1.11111$ grs. pure silver

sp. gr. of pure Silver = 10.45

1 C.T. pure Silver = $\frac{252.458}{10.45} = \frac{2.4021892}{1.0191163} = \text{l. } 2638.21 \text{ grains}$